

10/016,628
DOCKET NO. SH-0028US

8

REMARKS

Claims 1-21 and 23-25 are all the claims presently pending in the application. Claims 1, 5, 14-15, and 19 are amended to more clearly define the invention and claim 22 is canceled. Claims 1, 14, and 19 are independent.

These amendments are made only to more particularly point out the invention for the Examiner and not for narrowing the scope of the claims or for any reason related to a statutory requirement for patentability.

Applicant also notes that, notwithstanding any claim amendments herein or later during prosecution, Applicant's intent is to encompass equivalents of all claim elements.

Entry of this §1.116 Amendment is proper. Since the Amendments above narrow the issues for appeal and since such features and their distinctions over the prior art of record were discussed earlier, such amendments do not raise a new issue requiring a further search and/or consideration by the Examiner. As such, entry of this Amendment is believed proper and Applicant earnestly solicits entry. No new matter has been added.

Claims 1-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Watanabe reference.

This rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

A first exemplary embodiment of the claimed invention, as defined by independent claim 1, is directed to a pellicle for protecting a reticle, on which a circuit pattern is formed for

10/016,628

9

DOCKET NO. SH-0028US

manufacturing a semiconductor device, from an attachment of a foreign matter. The pellicle includes a pellicle film, a pellicle frame, and an adhesive. The pellicle frame includes a body part having a frame shape, the height of which is substantially constant, and an upper protruding part on an upper end of the body part that protrudes upward from the upper end of the body part and directly contacts a surface of the pellicle film. The height of the upper protruding part is constant. The adhesive is between the body part and the pellicle film and contacts the upper protruding part of the pellicle frame.

A second exemplary embodiment of the claimed invention, as defined by independent claim 14, is directed to a photomask that includes a reticle, a pellicle and an adhesive. The reticle includes a circuit pattern for manufacturing a semiconductor device. The pellicle protects the reticle from an attachment of a foreign matter. The pellicle includes a pellicle film, and a pellicle frame. The pellicle frame includes a body part having a frame shape, the height of which is substantially constant, and an upper protruding part on an upper end of the body part that protrudes upward from the upper end of the body part and directly contacts a surface of the pellicle film. The height of the upper protruding part is constant. The adhesive is between the body part and the pellicle film and contacts the upper protruding part of the pellicle frame.

A third exemplary embodiment of the claimed invention, as defined by independent claim 19, is directed to a pellicle frame arranged between a reticle, on which a circuit pattern is formed for manufacturing a semiconductor device, and a pellicle film, through which a light transmits to said reticle. The pellicle frame includes a first portion that directly contacts the pellicle film, an adhesive film that contacts the pellicle film, and a second portion that contacts the adhesive film.

10/016,628
DOCKET NO. SH-0028US

10

The first portion contacts the adhesive film.

It has been very difficult to ensure that the pellicle film in conventional pellicle frames are parallel to the surface of the reticle because these conventional frames are attached to the pellicle film and the reticle using adhesives. Thus, the distance between the pellicle film and the reticle is not only a factor of the height of the pellicle frame, but also the height of the adhesives. These adhesives exhibit a degree of elasticity which causes the height of the adhesive to vary with the amount of pressure. If the pressure varies across the surface of the pellicle frame, then the height of the adhesive varies and the pellicle film cannot be made parallel to the reticle.

In stark contrast, the pellicle frame of the present invention includes an upper protruding part that extends from the upper surface of the frame and directly contacts the pellicle film and also a lower protruding part that extends from the lower surface of the frame and directly contacts the reticle. In this manner, through the direct contact of the upper protruding part with the pellicle film and the direct contact of the lower protruding part with the reticle, the pellicle film is accurately positioned parallel to the reticle.

Further, the adhesive of the pellicle frame contacts the upper protruding part. In this manner, direct and reliable contact is ensured between the pellicle film and the upper protruding part. (Page 16, line 33 - page 17, line 9).

10/016,628
DOCKET NO. SH-0028US

11

II. THE PRIOR ART REJECTION

The Examiner continues to allege that the Watanabe reference teaches the claimed invention. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by the Watanabe reference.

The Watanabe reference does not teach or suggest the features of the present invention including an adhesive film that contacts the upper protruding part of the pellicle frame (claims 1 and 14) and an adhesive that contacts the first portion (claim 19). As explained above, this feature ensures direct and reliable contact between the pellicle film and the upper protruding part.

Rather, and in stark contrast, the adhesive 5 that is disclosed by the Watanabe reference is not in contact with the seating ring frame 2. Indeed, the adhesive 5 is only in contact with the outer frame 1. Thus, the adhesive 5 cannot ensure direct and reliable contact between the seating ring frame 2 and the pellicle film 4.

Further, the Watanabe reference clearly does not teach or suggest the features of the present invention as recited by claims 3-4, 6-8, 11-12, and 17-18 including: 1) an upper protruding part formed on an outer edge of the upper end of the body part (claims 3-4 and 17); 2) upper protruding parts formed on both an inner edge and an outer edge of the upper end of the body part (claims 4 and 18); 3) a lower protruding part formed on an inner edge of the lower end of the body part (claims 6 and 18); 4) a lower protruding part formed on an outer edge of the lower end of the body part (claims 7 and 18); 5) lower protruding parts formed on both an inner edge and an outer edge of the lower end of the body part (claims 8 and 18); 6) a top end of the upper protruding part having a sharp edge (claim 11); and 7) a bottom end of a lower protruding

10/016,628
DOCKET NO. SH-0028US

12

part having a sharp edge (claim 12).

Indeed, the Examiner fails to allege that the Watanabe reference teaches or suggests any of these features.

Therefore, the Watanabe reference does not teach or suggest each and every element of the claimed invention and the Examiner is respectfully requested to withdraw this rejection of claims 1-21 and 23-25.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that claims 1-21 and 23-25, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

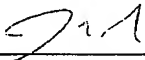
10/016,628
DOCKET NO. SH-0028US

13

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

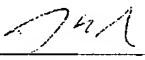
Date: 11/3/04


James E. Howard
Registration No. 39,715

McGinn & Gibb, PLLC
8321 Old Courthouse Rd., Suite 200
Vienna, Virginia 22182
(703) 761-4100
Customer No. 21254

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Amendment by facsimile with the United States Patent and Trademark Office to Examiner Nicole M. Barreca, Group Art Unit 1756 at fax number (703) 872-9306 this 3rd day of November, 2004.


James E. Howard
Registration. No. 39,715